

Nanopublication – Computational Image Analysis – AQC0916

by Arnaud Quercy · A Major – Research on Harmony – Variations 9 · 2025



CLAIM 1: COMPUTATIONAL IMAGE ANALYSIS – AQC0916

Computational image analysis [3] of artwork A Major [1] – Research on Harmony – Variations 9 (AQC0916) [2] by Arnaud Quercy [2] using k-means clustering method with 10 color extraction parameters. Analysis includes color distribution, texture metrics, brightness/contrast measurements, and spatial pattern characterization. Analysis completed on 2025-12-11.

CONTEXT

Analysis performed according to MMIDS-CMP-2025 [3] includes four metric categories: (1) Color distribution via k-means (10 colors), (2) Texture analysis using Haralick features, (3) Brightness and contrast measurements, (4) Spatial pattern characterization. Source image [5]: 1932x1932 pixels. Analysis date: 2025-12-11.

COLOR ANALYSIS

Rank	Color	Hex	%	Family	Name
1		D4AA7C	20.9	orange	tan
2		65D1CD	19.9	green	mediumturquoise
3		DFBB8D	19.1	yellow-orange	burlywood
4		E2DBB2	13.3	yellow	wheat
5		4EACDA	9.8	blue	cornflowerblue
6		494844	7.0	gray	darkslategray
7		EFEAD7	4.1	yellow	antiquewhite
8		EFDC43	3.8	yellow	sandybrown
9		25251E	1.3	yellow	very dark gray
10		727E79	0.7	green	gray
11		113E3E	0.3	blue-green	darkslategray [Accent]
12		B3C4AF	0.3	yellow-green	silver [Accent]
13		476C87	0.3	blue-violet	grayish purple [Accent]

Color Families:

Family	%
yellow	22.6
orange	20.9
green	20.6
yellow-orange	19.1
blue	9.8
gray	7.0
blue-green	0.3
yellow-green	0.3
blue-violet	0.3

Accent Colors:

Hex	Family	Name	Chroma
113E3E	blue-green	darkslategray	15.8
B3C4AF	yellow-green	silver	13.5
476C87	blue-violet	grayish purple	19.6

TEXTURE ANALYSIS

Metric	Value
Global Roughness	0.157
Mean Local Roughness	0.014
Roughness Uniformity	0.025
Edge Density	0.023
Mean Gradient Magnitude	0.116
Gradient Variance	0.073
Gradient Smoothness	0.0
Directional Coherence	0.052
Pattern Complexity	0.117
Pattern Repetition	1.0
Detail Frequency Ratio	0.616
Spatial Variation	0.1
Texture Consistency	0.669

BRIGHTNESS & CONTRAST ANALYSIS

Metric	Value
Mean Brightness	0.694
Brightness Variance	0.157
Brightness Uniformity	0.773
Brightness Skewness	-1.593
Brightness Entropy	6.613
Rms Contrast	0.157
Michelson Contrast	1.0
Weber Contrast	0.342
Mean Local Contrast	0.016
Contrast Uniformity	0.0
Dynamic Range	1.0
Effective Dynamic Range	0.604
Shadow Percentage	8.071
Midtone Percentage	13.884
Highlight Percentage	78.046
Shadow Clipping	0.001
Highlight Clipping	0.001
Tonal Balance	0.0
Fine Contrast	0.007
Medium Contrast	0.02
Coarse Contrast	0.035
Multiscale Contrast Ratio	0.212
Edge Contrast	0.116
Contrast Clustering	0.331

SPATIAL DISTRIBUTION ANALYSIS

Metric	Value
Spatial Coherence	0.715
Color Clustering	0.381
Color Transition Smoothness	0.704
Transition Uniformity	0.498
Sharp Transition Ratio	0.1
Transition Directionality	0.068
Mean Saturation	0.398
Saturation Variance	0.031
Low Saturation Ratio	0.266
Medium Saturation Ratio	0.698
High Saturation Ratio	0.036
Saturation Clustering	0.999
Hue Concentration	0.377
Complementary Balance	0.092
Analogous Dominance	0.637
Temperature Bias	0.275

Methodology

This analysis employs standardized computational methods for objective image characterization. Color extraction uses k-means clustering algorithm. Texture analysis applies Haralick feature extraction. Brightness metrics include mean, variance, and distribution analysis. Spatial patterns are characterized through coherence and clustering measurements. All methods are deterministic and reproducible. Analysis performed by Multimodal Institute's computational imaging systems.

REFERENCES

[1] Arnaud Quercy (2025). A Major - Research on Harmony - Variations 9 - Catalog raisonn  . <https://arnaudquercy.art/en/catalogue-raisonne/AQC0916.html>

[2] Quercy, A. (2025). A Major - Research on Harmony - Variations 9 - Gallery. https://artquamanima.com/en/art-works/2025/11/a-major-research-on-harmony-variations-9_ifr.html

[3] Quercy, A. (2025). Computational Image Analysis Standard - MMIDS-CMP-2025 <https://multimodal.institute/en/publications/2025/11/mmids-cmp-2025-computational-image-analysis-standard-dg1.html>

EPISTEMIC PROFILE

Claim type	computational analysis
Voice	third person
Epistemic status	empirical measurement
Methodology	computational analysis
Certainty	high

CHECKSUM (SHA-256)

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